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ABSTRACT

This summary documents five conferences, held throughout Massachusetts for leaders in business and education, to increase their awareness of industry-education partnerships and to provide them with information on how to initiate, organize, and sustain partnerships. Section 1 highlights keynote addresses by five educators and five businesspeople who had participated in successful partnership programs. Section 2 is the "State's Perspective on Partnerships," an address that was delivered by representatives of the Massachusetts Department of Education. Section 3 highlights presentations of partnership models that were represented by a business and education partnership. It begins with a summary of the benefits and problems that school and business partners articulated during their presentations and concludes with profiles of each of the partnerships participating in the symposia. Each profile contains the address; names of presenters; program focus; participants; and structure, management, and coordination. Section 4 presents the themes that ran through the four workshops held in the afternoon sessions: educational standards/student competence, career awareness/work preparation, strengthening the image of education, and community involvement. The section ends with a list of strategies recommended by participants. The final section is an overview of closing comments. (YLB)

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BUSINESS AND EDUCATION: PARTNERS FOR EXCELLENCE

The Proceedings of

Five Regional Conferences

co-sponsored by

Massachusetts Department of Education

Associated Industries of Massachusetts

Massachusetts Association of School Superintendents

Massachusetts Business Roundtable

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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April and May, 1984

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Business and Education: Partners for Excellence

The Proceedings of Five Regional Conferences

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Introduction

Business and Education: Partners for Excellence *was the theme of a series of five regional conferences held throughout Massachusetts for leaders in business and education. The purpose of the conference was to increase these leaders' awareness of industry-education partnerships and to provide them with information on how to initiate, organize, and sustain partnerships. The conferences were an outgrowth of research that the Office of Community Education of the Bureau of Student, Community, and Adult Services, Massachusetts Department of Education, had done on the nature of business partnerships in schools and continued its efforts toward providing a Community Education model for the establishment of these partnerships.*

The conferences were sponsored by a coalition of business and education groups that included, on the business side, the Associated Industries of Massachusetts and the Massachusetts Business Roundtable, and on the education side, the Massachusetts Association of School Superintendents and the Massachusetts Department of Education. A Steering Committee comprised of members of these organizations worked to ensure that the conferences met the needs of both businesspeople and educators as they approached industry-education partnerships, whether as experienced practitioners or interested newcomers. The Committee designed a day-long conference, to be repeated in different parts of the state, which included the following main components:

- *Keynote Addresses by educators and businesspeople who had participated in successful partnership programs.*
- *A "State's Perspective on Partnerships" address delivered by representatives of the Massachusetts Department of Education.*
- *Presentations of partnership models which reflected a variety of partnership modes.*
- *Workshop sessions which gave conference participants the opportunity to discuss the critical issues that emerge as educators and businesspeople define and develop their partnerships.*

This summary documentation of the five conferences aims to serve three primary purposes: 1) to highlight the major addresses given by distinguished leaders from business and from education; 2) to provide profiles of the partnership programs that were presented at the conferences; and 3) to summarize the solutions and issues that emerged in discussions after the presentations of the models and in the afternoon workshops. It is our hope that, by making available the proceedings of the conference through this publication, we will broaden awareness about partnerships and provide assistance to leaders in education, business, and community organizations who are interested in strengthening education in their cities and towns through the partnership approach.

The Community Education Project of the Department of Education welcomes your participation in helping us provide information and assistance to business and education leaders on industry-education partnerships. We plan to continue to disseminate information gathered throughout the state on your successful practices — whether they involve new partnerships or updates on established partnerships. We would, therefore, be pleased to hear from school and business people regarding their partnerships. Kindly send your information to:

Susan Freedman
Coordinator of Community Education
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1385 Hancock Street
Quincy, MA 02169

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The Keynote Addresses

The Keynote Speakers, representing both education and business, addressed each conference and presented their perspectives on the value and potential of industry-education partnerships. These speakers raised many issues that were echoed throughout the day and that struck at the essence of school-business partnerships.

"We need to optimize the resources of our new workers and make them more productive."
Sherwin Greenblatt
Executive Vice President
Bose Corporation

Business Keynoters at each conference spoke of the economic necessity of having partnerships which will develop a workforce for the future. They also spoke, as did the educators, of the ingredients that characterized successful partnerships. **Sherwin Greenblatt,** Executive Vice President of the Bose Corporation, reminded his audience that in ten years there will be 40% fewer youngsters entering the workforce annually than there are today. He emphasized that employers needed to work with schools, therefore, to ensure that students are maximally productive when they begin work. Mr. Greenblatt said that personnel officers had told him that much of the present workforce is "uninformed, unprepared, untrained, mismatched, and has a poor attitude." The solution, he feels, is to optimize the human resources that we have by setting goals for the upcoming labor force. He feels that high school students need 1) to be knowledgeable about themselves and to know what they like and want to do; 2) to be able to cope with living in our social structure, which includes managing social interaction, being able to analyze situations and make decisions, managing their personal finances, and planning and managing their careers; and 3) to be knowledgeable about the opportunities in the business community in which they live. Mr. Greenblatt believes that schools and businesses share the responsibility for educating parents about the job realities in communities so that parents' expectations can be harmonized with the current job situation and with their children's skills and desires.

"Profit is more heavily dependent on intellectual content than on raw material or labor content."
Lawrence McKenna
Director, R&D
Plastics
Monsanto Polymer
Products Company

Lawrence McKenna, Director of Research and Development in Plastics for the Monsanto Polymer Products Company, gave a slightly different slant on the way that business and industry are involved in partnerships with education. After tracing the fundamental structural changes in industry over the last century, he noted that profit is now seen as "more heavily dependent on intellectual content than on raw material or labor content." Therefore, business requires a "significantly higher level of education and intellectual skills than ever before," and is looking for ways to "help our educational systems meet these challenges and better prepare for future challenges." In addition, "the sense of social responsibility that is becoming a way of life in American business includes the conviction that technical and management talents developed and tested in industry can and should be made available to help critical community needs." Dr. McKenna indicated that in his experience with partnerships he had found that the benefits of assuming this responsibility for education in the community were "real and important," and that there were the following areas of "expertise that business could bring to partnerships:"

1. Tested and proven methodologies for staff organization, administration, development and career planning.
2. Strategies for setting and reaching goals for achieving excellence.
3. Identification and development of programs for future needs.
4. Funding for experimental programs.

Dr. McKenna also spoke about the synergy that resulted when diverse groups were brought together and suggested the following techniques for setting the stage to develop new and better solutions to problems:

1. Focus on the objectives first, not the problems.
2. Be sure to set high standards and expectations.
3. From the beginning, identify and gain the involvement and commitment of the groups that will be affected.
4. Assign a central staff function, preferably located in the schools, which is fully charged with responsibility for making the partnership happen.

Howard Greis, President of the Kinefac Corporation and a member of the State Board of Education, alerted conference attendees to a new investment opportunity, the "unlimited partnership." He indicated that "over 350 Massachusetts companies have already taken advantage of this special investment opportunity, the School/Business Partnership. Relatively small investments in time, money, and equipment made by these companies are already producing significant results." He went on to point out that "the range of possibilities for business investment in the improvement of our public schools is virtually unlimited, and so are the rewards. By entering into a partnership with a local school, you can show the students, the faculty, and your employees that your company is a committed corporate citizen, and you will be helping to improve your company's locale, since a community is only as good as the education it affords its citizens. Finally, you will be giving yourself the opportunity to become involved in the most important growth industry in our nation, our public schools." Mr. Greis concluded by reminding business leaders that for a limited cost, a partnership is "a good investment. It will not give a company leveraged tax deductions or produce a big balloon payment in five years. But, it may well provide a solid long-range payback. With an improved educational system in the Commonwealth, there is a far better chance that many of the major areas of state government expenditure such as public assistance, the court system, corrections, and unemployment insurance could be more effectively controlled. There will be a better supply of trained entry-level employees, and your community will have a better environment in which your company can grow. So, why not join the growing crowd; invest in an unlimited partnership with the public school in your area."

"Invest in an unlimited partnership with the public school in your area."
Howard Greis
President
Kinefac Corporation

The economic necessity of industry-education collaboration was stressed by **William Spring,** Vice President for Public Affairs of the Federal Reserve Bank of Boston, who stated that the challenge now facing our nation was to develop "an entire workforce sufficiently well educated to earn for itself and for the country a decent living in a technologically sophisticated world." Mr. Spring used as his reference point the Boston Compact, which is an agreement between the Boston Public Schools and the Boston business community to provide jobs for Boston graduates and to upgrade the minimum competency standards in reading and math skills. Businesspeople supported the Compact, according to Mr. Spring, because they realized that in order for Boston to continue its progress in the medical and technological industries, "it would need a sizable number of well-trained high school graduates," and to accomplish this goal, business would have to "participate actively in a substantial upgrading of the city's schools." Mr. Spring described the entry-level job market as "characterized by ignorance on both sides. The average high-school student from a poor family lacks critical basic information and skills: the ability to apply for, obtain, keep and advance in a job." On the employer side, personnel staff too often "don't fully understand young people of high school age, particularly those who are poor." The Boston Compact and other collaborative school-business programs create a "bridge between the school and the business community that will make it possible to develop accurate information on both sides of the door and to build new institutional relationships that provide opportunity to all who will prepare themselves."

"Today national economic necessity pressures us to make good on our long standing rhetorical commitment to quality education for all."
William Spring
Vice President, Public Affairs
Federal Reserve Bank of Boston

Russell Johnson, Manager of United States College Relations for Digital Equipment Corporation, described the Math/Science/Technology Project in which Digital and the University of Massachusetts/Amherst collaborated to provide qualified math and science teachers for the public schools. Outstanding undergraduates who had majored in the natural sciences and had a predisposition to teach were recruited for a graduate study program which includes course work, paid work experience in industry, and the promise of positions in industry for each of the three summers following the completion of the degree

program. Based on this experience, Mr. Johnson outlined the characteristics that contributed to the success of the program and that were transferable to other partnership activities:

- All involved believed that there was a real problem to be addressed.
- All involved would benefit if the problem could be solved.
- All of the parties had resources to offer.
- The specifics of the solution were open for discussion and negotiation.
- The partners were ready to take risks.
- Paths of communication were kept open and continuously used. Also, the partners were not afraid to admit they did not have all of the answers or that they did not understand each other.
- The partners kept the project as the main focus of their work. They did not get bogged down in details and looked for solutions to problems instead of assessing blame.
- The partners entered the relationship realizing it would take longer than desired to impact the problem and they would meet on a regular basis to evaluate their results and plan their next steps.

"Partnerships are one of the most important vehicles to effect change within public education."
Russell Johnson
Manager of College Relations
Digital Equipment Corporation

The **educators** who served as Keynoters represented a breadth of experience in the field, and included superintendents, a former member of the Massachusetts Board of Education, and a physician turned educator. They spoke of the interdependence of our educational, business and community institutions and of the importance of communication and of commitment by educational and community leaders to the goals of school-business partnerships. **John Collins,** Superintendent of the Shrewsbury Public Schools, reviewed two factors that he believes are causing the worlds of business and education to move closer together:

1. The decline in the number of high school graduates. By 1990, he noted, there will be 60% of the graduates that came out of high schools in 1980.
2. The level of economic competition facing America from throughout the world.

Dr. Collins then described how the United Kingdom is addressing the second factor, as he had recently learned from discussions with business/education partnership representatives from England. The acute economic situation in England has resulted in formal steps to unite the business and education communities, and he shared some of their "ideas and how they might enhance our renewal efforts for partnerships:"

> There is a real partnership between government, business and education in the development of curriculum and in the teacher training process. Top level people from industry work full time with educators and Department of Education personnel to develop curriculum and to provide in-service training. The emphasis in England is on the primary level, not the secondary, utilizing the theory that the best interventions are made during the earlier years. For example, students learn about the business world through their primary curriculum, and relate their math, sciences, and social studies problems to the business world. Because there is the realization that the academic disciplines are abstract and very few youngsters understand their application to the practical world, there is a formalized process at work on the part of the Department of Education to research and organize conceptual ideas about business and the industrial world. The expectation is that working together the business world and educators can provide a vehicle for youngsters to apply academic abstractions to the real world.

Dr. Collins concluded his remarks by asking those present to note that he was "not prostituting the Liberal Arts tradition to the business community." Rather, he was "wary of superficial partnerships, because they won't last." He reiterated his concern that we may develop "superficial relationships built on the premise of 'what kinds of things can business give us' rather than partnerships built upon the mutual interchange of human resources."

"Partnerships need to be built upon the mutual interchange of human resources."
John Collins
Superintendent
Shrewsbury Public Schools

William Densmore, Chairman for School-Business Partnerships for the Worcester Area Chamber of Commerce and Vice President of the L.F. McManus Company,

stated that the economic vitality of the Worcester Area depends upon "brainpower, motivation and collaboration." He asserted that "education is a shared responsibility with partnership the key." While he feels that the current interest in and commitment to educational improvement at the state and national levels is encouraging, he believes that "local collaborative approaches will be the greatest source of progress." He emphasized that to meet a partnership's educational goals requires "a real understanding of a community, one's relationship to it, the different facets of it and how they interact, what opportunities exist and what preparation is required, what problems exist and how they are resolved, how constructive change takes place or is stifled, and how the community functions to fulfill our material needs. . . As those educators who have experimented know, the people and the institutions of the community are a rich resource, waiting to be asked." However, he cautions that educators must be "results oriented" and able to connect their educational standards to specific goals. He concluded his comments with a listing of "educational imperatives" which require that schools aim toward measurable results, modernize their personnel practices, assure cost effectiveness in school management, and maximize their use of state and federal aid.

"Education is a shared responsibility with partnership the key."
William Densmore
Chairman for School-Business Partnerships
Worcester Area Chamber of Commerce

At another conference, **Thomas Donahoe**, Superintendent of the Springfield Public Schools, reiterated the theme of the interrelatedness of the major institutions in communities, adding that the "public schools provide a literate and educated population, universities provide theories, research and ideas, and industry provides the practical applications and the adaptation of ideas. If the circle of interdependence is working well, equilibrium and harmony exist in the society." He also indicated that he believes that "to maintain our society based on democratic capitalism, we need to produce people who understand our economic system, and understand our emerging technologies." Partnerships can be the key ingredient in meeting this challenge, he contends, although we must approach this attempt at reform candidly, as many other reforms have raised the question of blame. Superintendent Donahoe believes there has been sufficient blame for everyone, and now is the time for constructive communication. He listed the opportunities that partnerships with schools offered to business and the community:

- Involvement in the educational development of youth through providing first-hand the requirements, satisfactions and expectations of the business world.
- Increased understanding of the free enterprise system by students and staff.
- Raised teacher and administrator morale from indications that respected "outsiders" are willing to help educate students.
- Increased understanding of and support for the school system from employees and community residents.
- Identity as a community-involved company.

Speaking from the success that the Springfield schools have had in working with businesses and community organizations, he also indicated opportunities that exist for schools when they participate in partnerships:

- Access to expert assistance that will help provide a more complete education for students and management skills for teachers.
- Interaction with people from the business world.
- Awareness of the complexities, constraints, and concerns of industry.
- Assistance in meeting special needs beyond the resources of the schools.
- Participation in the economic development and decision-making process of the community.

"Partnership projects benefit all partners and are based on the expectations, resources, capabilities, and limitations of each."
Thomas Donahoe
Superintendent
Springfield Public Schools

Bart O'Connor, Superintendent of the Attleboro Public Schools, warned his audience about developing "pocket programs" of partnership, which are programs that are not sufficiently widespread and do not involve enough of the school and business community. Speaking from his experience with the partnerships in the greater Attleboro area, he also spoke about the benefits to schools and to businesses that accrued from sustained collaborative relationships. In addition, he provided some tips on maintaining and sustaining a partnership that had been gathered over the thirteen years that he had worked with the Attleboro Chamber of Commerce:

"Quality, not quantity, should be a basic policy for every partnership."
Bart O'Connor
Superintendent
Attleboro Public Schools

- Partnership is not a cure-all and is not an altruistic activity.
- Partnership is not appropriate to all endeavors.
- No one partnership will produce immediate and widespread change.
- Schools need to listen closely to business people and should not be put off by their cautious approach.
- Partnerships require the same leadership, imagination, commitment, and management expertise that are required in school or business affairs.
- Communities with primarily small businesses can use the principles that govern working with large companies and develop models that are both cost effective and cost efficient.
- Educators must overcome their fear that business will take over and business executives should overcome their fear that a project with schools will cost a bundle and offer little return.
- There is no "how-to" kit that exists on building education-business partnerships. The "how-to" comes from the initial dialogue and communication, which results in mutual decisions on what to do.
- Business people should be aware that, when forming partnerships with educators, they have to learn about "multiple constituencies and multiple lines of management."
- Dollars are not necessarily the issue in forming a partnership. In the beginning, focus should be on discussion and analysis in order to arrive at a mission statement or goals. The process of discussion is the foundation for developing trust, mutuality, and commitment. Business people have to justify the appropriation of funds to their stockholders, whether in terms of improved public relations, a better educated workforce, or some other advantage. Businesses are more apt to develop a partnership with a school if they see a long-term business investment resulting. Anything a school can do to reduce the cost of investment at the beginning of the program will make it possible to ensure a longer term and larger investment.

Superintendent O'Connor concluded by saying that partnerships should be viewed as "another tool to help teachers provide the best education possible for students. . . Our dividends will appear in the form of a more literate society, of better prepared employees, and of communities that are proud of their schools."

A different approach was taken by **Roger Nichols,** Director of the Boston Museum of Science. Dr. Nichols presented data that supported his claim that "the U.S. citizenry and its leaders are below average in their understanding of science and technology and of its impact on society." He argued that while millions of dollars have been spent in and through scientific establishments, this money has gone for research and not for education. He also called attention to the dropping SAT's of college-bound students, the decline in applications to schools of education, the 20-25 point decline in SAT's of those students who do go into education, and the lower salaries of people who chose to go into teaching as compared to those who enter engineering from college. Calling this situation a "recipe for a standoff," Dr. Nichols declared that he is optimistic, however, because he sees that "an excellent mechanism for rapid improvement of the national posture is through the volunteer route." He noted that "special partnerships are being formed between businesses and schools. Corporations are adopting school systems; science consultant programs are being sponsored, industries are sponsoring science teachers' workshops; programs are being organized to increase the number and quality of students entering science and engineering; summer employment is being offered in industry for high school science teachers as well as for students; career counseling is being provided by companies to high school students; and hardware and software are being donated in great quantities." Dr. Nichols concluded with some reminders about the ingredients found in successful partnerships and with some encouraging signs that he sees in the increased interest of young people in science. As a representative of an educational institution, he pledged his support to the development of partnerships and indicated his desire to have the Museum play a leadership role.

"...an excellent mechanism for rapid improvement of the national posture is through the volunteer route."
Roger Nichols
Director
Boston Museum of Science

State's Perspective on Partnerships

John Lawson
Commissioner
Massachusetts
Department of Education

As we all know, collaborative programs between schools and business are increasingly receiving the attention of the public and the press. Throughout the country, they are touted as the new panacea for the ills in education and the workplace. Numerous studies on public education in America conclude that in some way partnerships can be a part of the solution. Let me start the morning off by giving you a sense of the Department of Education's perspective on partnerships.

Over the past two years the Department has studied a number of partnerships to determine what it is that contributes to their success or failure. Our report on this study, "Creating School-Business Partnerships," is included in your conference packet, and provides many models for initiating, organizing, programming for, and implementing successful partnerships.

Our study has shown that partnerships, by their very nature, are largely grassroots developments. Successful partnerships are the result of local school, business and community people working together to address their common training and educational problems. Partnerships, therefore, reflect the needs and the individuality of their respective communities, and cannot be put into one mold. We have found, however, that there are common characteristics that are present in the working relationships among partnership organizers and in the structures that they establish to reach their goals. I will talk briefly about a few of these characteristics, as I am sure you will be hearing more about them as the day goes on.

First, it will not surprise most of you to hear that successful school-business partnerships have the support of the key decision makers in each organization. The support of these key decision makers is essential from the earliest stages of partnership planning. Superintendents or Chief Executive Officers — or their representatives — must be present to speak for their organizations. They need to be able to say what resources they will commit, and to know to what they will and can say "Yes." This commitment from the top also serves to attract other schools and businesses to join in with the partnership effort early on, even before concrete results have been achieved.

After the top leaders have signed on, it is important for the success of the partnership to involve many diverse levels within each organization. It is at these levels that people's jobs and work environments are potentially impacted, and it is important that these individuals bring their ideas and experience to the planning process. These people will also be important in communicating the goals, activities and progress of the partnership back to their peers at their respective organizations.

James Case
Associate Commissioner
Division of Curriculum
and Instruction

Once the cast of characters is identified and in place, partnerships that have been successful have devoted a lot of time to making disparate individuals into a group of people who consider themselves partners. Business and school people, who are accustomed to blaming each other for the shortcomings of the educational system, need to explore, reconcile, and dissolve potential roadblocks each brings to the table, such as inaccurate assumptions, attitudinal barriers, skepticism, mistrust based on past history, and distrust of each others' motives. All of that baggage must be acknowledged and gotten out in the open. It then may be helpful for them to think about that newly popular phrase, "Education is too important to be left to educators." In discussing how the educational system affects the functioning of both the workplace and the school, they are likely to discover their interdependence. No longer will their mission be one of do-goodism or *noblesse oblige*, but rather one which recognizes their mutual self-interest and the benefits that lie ahead for each partner.

It then takes time for the group to develop a bond: a sense of connectedness and allegiance to each other and to their common purpose. All of the best intentions will not come to pass if the group members do not like each other and trust each other.

However, through meeting and working together, business and school representatives — and community participants who may be involved, have the opportunity to get to know each other as people, to get invested in the projects being discussed, and to begin to care about their implementation and success. It takes time to get people "hooked" on a project and dedicated to its success, but once that happens, they generally have found that the front end investment of time was worthwhile and that it paid off in geometric proportions.

Kathleen Atkinson
Director
Bureau of Student, Community and Adult Services

Too many enthusiastic and excited groups have never brought their good ideas to fruition, however, because they have not clearly defined the roles and responsibilities of each member. When everyone is responsible for a task, no one does it. When each person knows his or her role, then there is accountability and more likelihood of success. So it is with partnerships. Successful collaborations set up vehicles for organizing themselves and their work, and have clearly defined roles and responsibilities for their members.

One final characteristic of successful partnerships is that they set both long and short term goals, and they seek to have clearly defined projects that allow them to have early small successes from which they can build. When there has been no history of school-business collaboration in a community, it is not necessary to make a big splash right away. Small programs, perhaps in one school, affecting only a small number of students at first, can be important in setting a positive climate, building credibility, and engendering confidence among the business community, school staff, parents, and students.

Speaking as an educator, I can candidly acknowledge that schools and educators sometimes have been a part of the problem and other times a part of the solution in the history of industry-education collaboration. In this state and elsewhere, individual educators have rebuffed the efforts of business leaders to develop collaborative programs. Other educators, however, have offered the first proposals, and have created working relationships with CEO's, community representatives such as Chamber of Commerce leaders, and others interested in the long-range economic health of the community and its residents. We are all here because we have a mutual self-interest in educating and training the workforce of the not so distant future, and to accomplish this we all — both educators and business men and women — need to discard some of our old attitudes and be willing to try new methods for reaching these goals.

Susan Freedman
Coordinator
Community Education

Collaborative relationships may mean accepting new skills, attitudes, time frames, and commitments for some of us. It is reasonable to ask, therefore, "What can business people and educators realistically expect for making this investment in partnerships?"

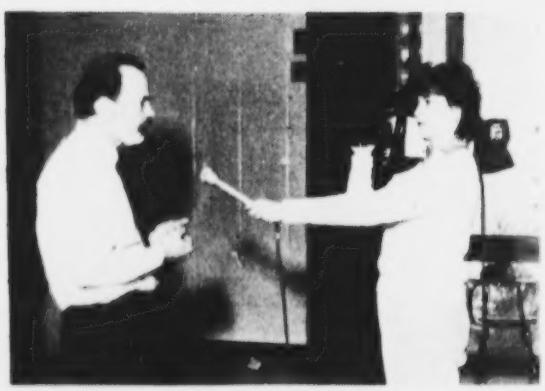
Our study revealed that corporate and school personnel had very positive outcomes from the programs in which they were involved. Concrete indicators, such as increased numbers of job applicants, better prepared job candidates, and better skilled and more highly motivated workers were mentioned by business leaders as benefits that had accrued to them as a result of their participation in partnership activities. They also indicated that they had a better appreciation of how schools function and the particular constraints under which they operate. School administrators have praised business people's involvement in curriculum design, which has led to updated and integrated programs of study for students, and the availability of corporate personnel and resources for job shadowing experiences for students and for retraining sessions for teachers. They also are impressed with the enthusiasm with which corporate personnel have worked with students, whether in career awareness activities or in specific training programs.

Another question you could ask is, "Where does the State Department of Education stand regarding partnerships?"

The Massachusetts Department of Education enthusiastically supports industry-education partnerships. Most obviously, we do this by being a co-sponsor of this conference. The Department believes that partnerships are a vehicle for involving the business and human service community in schools and in education for the mutual benefit of the schools, the businesses, and the community as a whole. We have seen that when school and business

leaders work together in the areas of skill development, career awareness, and the professional development of teachers, the results have been more relevant educational programs for students, and more productive, better motivated workers for business. Therefore, we support conferences like this which are increasing the awareness of the potential of partnerships among people in education and in business.

Industry-education partnerships offer all of us a great challenge and a great reward. We in the Department are looking forward to hearing the models that will be described this morning. Equally important, we look forward to hearing the discussion this afternoon, as you tell each other and us the barriers and problems you encounter with your partnership efforts, and how the Department can work with schools and businesses to address some of these issues. Our goal is to provide assistance, to the degree we are able, and to help develop this essential resource in our state. Whether you are new to partnerships or are experienced, I encourage you to keep open your minds and ears, ready to bring back to your respective communities the ideas, commitment, and enthusiasm that I know will be generated by today's program.



Symposia of Partnership Developers

A. Summary of Symposia Discussions
B. Profiles of Partnership Models

Each conference presented four partnership models which were represented, in most cases, by a business and an education partner. These individuals were asked to discuss the following aspects of the partnership: how it was initiated, its activities, its structure and management, and its funding.

This section begins with a summary of the benefits and problems that school and business partners articulated during their presentations and concludes with profiles on each of the partnerships participating in the Symposia.

A. Summary of Symposia Discussions

Benefits of Partnership To Schools

- Teacher morale is increased when "outsiders" are in the schools supporting the educational system and taking an interest in education, instead of criticizing it.

- Teachers and students benefit from exposure to a range of businesses and career options through career awareness programs. They also benefit from world-of-work experiences in business settings.

- Business people provide outside resources that enhance the standard curriculum and demonstrate the relevance of the basic curriculum.

- Business contacts can make it possible for schools to maximize their resources through access to business surpluses and to business discounts.

- Business collaboration can result in technical assistance for schools, such as software that can be used to handle attendance monitoring, payroll, students' records, and other administrative areas of the school.

- Business people bring living examples into the schools of how the free enterprise system works.

Benefits of Partnership To Businesses

- It is more cost effective for businesses when students enter the workplace with the skills they will use and when students are familiar with the work environment. These factors contribute to decreased training costs and decreased employee turnover due to job dissatisfaction.

- Businesses are better able to attract the employees they want when the local school systems are strong.

- Businesses are more successful when the local area has the financial stability that comes from well-educated and well-trained residents.

- Businesses need to make students, parents, and teachers aware of career areas that will be in need of employees, such as those with shortages, non-traditional jobs, and newly emerging technologies and services.

- Businesses need more young people to understand the free enterprise system.

- Involvement with schools will help businesses understand better the products that schools need in order to teach, such as software, textbooks, and other resources.

- Business cooperation can increase students' motivation, especially when participation in these programs is related to students' attendance records or grades.

- Schools benefit from improved public relations when business and community people are in the schools during the regular day, observing and participating in the educational activities of the school.

- Schools benefit from increased public and political support through the community's involvement with the administration and the staff.

- After relationships have been established between schools and the business community, it is not uncommon to find that businesses will provide financial and equipment support for the school. However, schools should have no such expectations in initiating a relationship.

- Businesses find that employee morale improves through contact with students in the school because of the satisfaction that employees get from volunteering in the classroom.

- Businesses have the opportunity to inform students about their business, its career opportunities, and its place in the economic market when they participate in school programs. This awareness can yield future employees and potential customers.

- Businesses can perform some services more efficiently than can schools, and thereby can develop long-term customer relationships with the schools.

- There are tax benefits for some school-business arrangements, although usually these are secondary considerations in school-business relationships.

- Businesses improve their public image through their involvement with the schools and increase their voice in the community through their knowledge of the schools.

Issues for Schools

- Schools need to examine their attitudes about working with businesses and be prepared to take steps to change and adjust if necessary.

- Schools need to assess their needs and be prepared to indicate the areas in which they would like to collaborate with businesses.

- Schools need to review their curricula and determine the programs into which they can infuse career education and make the best use of business resources.

- Schools need to look at their staffing to see if they have individuals who can be designated to work on partnership activities.

- Schools need to determine how they will measure the outcomes from their partnership activities.

Issues for Businesses

- Businesses need to examine their attitudes about the schools and be prepared to take steps to change and adjust if necessary.

- Businesses must identify individuals whose responsibility it is to work with the schools and whose interests lie in this area.

- Businesses must assess whether the goals of a school are compatible with the goals of the business in the partnership relationship. The business must have some self-interest in the collaboration and not go into this program only out of "do-goodism" or a sense of civic responsibility.

- Businesses must have measurable outcomes that they expect from their collaboration with the schools.

B. Profiles of Partnership Models

The following partnerships made presentations at the regional conferences.

Andover Business-Industry-Community Education Collaborative
Address: Andover Public Schools, Anns Lane, Andover, MA 01810
Presenters: *Ruby Easton*, Coordinator, Andover Public Schools
Perry Vachon, Personnel Officer, Bank of New England/Baystate
Program Focus: To provide students and staff with assistance in career awareness and educational planning, and to provide local industry and community members an opportunity to get involved in and share some responsibility for the education of Andover youth.
Participants: Andover Public Schools
Area businesses and community organizations
Parents
Structure, Management and Coordination: The Collaborative is an association of business, education, parent and community representatives who meet monthly to plan, initiate, and support its programs and to report on its various activities. The Collaborative is overseen by a Coordinator, who is housed in the schools, plans for the monthly meetings, and directs the activities of the Collaborative.
Funding: The Coordinator's position, initially funded by a federal grant, is now funded through the School Department. Additional costs, such as for programs and expenses, are absorbed by the schools and businesses involved.

BSA Outreach Committee
Address: c/o Boston Society of Architects, 305 Newbury St., Boston, MA 02115
Presenters: *Roger Goldstein*, Chair, Education Outreach Committee, Boston Society of Architects
G. Jack Lisciandrello, Coordinator, Boston School Volunteers, Inc.
Program Focus: To establish programs of career education and advisement for high school students considering architecture as a career and to expand the public's awareness of architecture and architects.
Participants: Boston Society of Architects
Boston area schools
Structure, Management and Coordination: The BSA Outreach Committee, a permanent committee of the Boston Society of Architects, is composed of members of the BSA. This Committee works with area schools to develop programs that provide accurate information to high school students concerning the architectural profession. The Committee also works with other institutes, such as the American Institute of Architects, to organize career awareness activities.
Funding: Programs are generally operated at no cost; some programs receive small amounts of money from the BSA and other professional architects' associations.

Business-Education Collaborative
Address: 31 North Washington Street, North Attleboro, MA 02760
Presenters: *Val Boudreau*, Director, BICO Collaborative
Marsha Price, Human Resources Representative, Analog Devices
Program Focus: To pool and share resources between the schools and the business community by acting as a clearinghouse linking resources for the member organizations.
Participants: Ten local school systems
Six area corporations
Attleboro Chamber of Commerce
Structure, Management and Coordination: A Board of Directors, consisting of a representative from each of the schools and the 6 businesses, makes decisions for the Collaborative.

New member companies are accepted upon approval of the Board. Each school and business designates to the Collaborative a liaison who represents his/her institution and develops and coordinates the programs that are initiated by the Collaborative.
Funding: Programs are operated at no cost or are absorbed individually by the participating organizations.

Boston Student Human Services Collaborative

Address: Boston Public Schools, 26 Court St., Boston, MA 02108
Presenters: *Hubert E. Jones*, Dean, Boston University School of Social Work
Program Focus: To increase the amount and diversity of human and social services available to Boston Public School students and their families through state and local human and social agencies; to assist in both the identification of needed services and in the development of an efficient and effective city-wide service delivery system.
Participants: The Boston Public Schools
Human service agencies
Structure, Management and Coordination: The Collaborative is overseen by a Board of Directors composed of representatives of state agencies, human service umbrella agencies, the Boston Public Schools, and consumer groups, namely parents and students. Professional staff administers the implementation and operation of the Collaborative and works with the schools, agencies, and task forces that support the Collaborative. Each member school and agency appoints a liaison person to provide formal linkage with the Collaborative and to implement the services and activities to which that member institution has committed itself.
Funding: Funding for the Collaborative is received from monies and in-kind services from the member agencies and from the Boston School System. The Collaborative hopes also to receive funding from state agencies that support school based programs and from third party reimbursement sources.

Charles River Museum of Industry

Address: 190 Moody Street, Waltham, MA 02154
Presenters: *Michael Folsom*, Director, Charles River Museum of Industry
Joan Sheridan, Chairperson, Social Studies, Waltham Public Schools
Program Focus: To integrate the history of industrial development into the Waltham Public School curriculum through collaborative programs with the Museum.
Participants: Waltham Public Schools
Charles River Museum of Industry
Area businesses
Structure, Management and Coordination: The Director of the Museum and the Social Studies Chairperson are working with the schools and area businesses to develop curricula that integrate the issues of community and industrial history into the social studies program at every teaching level. They also coordinate tours of the Museum and local industrial sites. The Museum Director is developing programs with areas businesses, such as one that is interested in experimenting with innovative teaching methods and linking a dramatic group with the Museum's resources to teach history through theater.
Funding: The Museum has received several grants from the National Endowment for the Humanities and hopes to attract other grants in the future.

Cultural Education Cable Television Project

Address: 59 Temple Place, Boston, MA 02111
Presenter: *Linda DiRocco*, Director of the Cable Projects, Cultural Education Collaborative
Program Focus: To use the medium of cable television to foster working relationships between cultural organizations and community agencies and to encourage a multi-cultural exchange among Boston's diverse neighborhoods.
Participants: Cultural Access Through Cable Television
Community service agencies
Cultural organizations

Structure, Management and Coordination: Cultural Access Through Cable Television (CACTV), which is under the direction of the Cultural Education Collaborative, coordinates the partnerships between cultural organizations and community agencies in order to produce cable television programs that address the issues of these community agencies. CACTV provides training and workshops for project participants and a cable television access environment with production equipment made available on a first-come, first-served basis. The programs produced are shown on a local Boston cable station and at Viewing Centers located in community schools.
Funding: Financial support for this project is provided by the U.S. Department of Education and by corporate and foundation funds.

Lynnfield-Lexington-Digital Partnership (Project Crest)
Address: Digital Equipment Corporation, 30 North Avenue (FPO-A—4),
Burlington, MA 01803
Presenters: *Michele Fineblum*, Co-Director, Digital Equipment Corporation
Douglas Russell, Co-Director, Lynnfield Public Schools
Program Focus: To develop a computer-based curriculum unit for improving word problem solving skills among junior high and middle school aged students, using the content area of the physical sciences, and to train teachers to develop competence in designing curricula for this unit.

Participants: Lexington School System
Lynnfield School System
Digital Equipment Corporation
Structure, Management and Coordination: Project CREST is governed by a Board of Directors, which is composed of representatives from Digital's Educational Services/Management Division, representatives from both school systems, including the Superintendents of Schools, and the two project Co-Directors. The Board of Directors is responsible for making major policy decisions which affect the scope of the project and for providing direction for the determination of future goals. One of the Co-Directors is responsible for overseeing the training activities and coordinating the completion of the final products, while the other is responsible for the administration of the Federal grant.
Funding: The startup expenses for this project are funded through a grant from the United States Department of Education, Center for Libraries and Educational Improvement and, in part, by Digital. It is anticipated that the project will eventually be self-sustaining through revenues returned to the school systems from the marketing of the curriculum products.

Massachusetts Future Problem Solving Program
Address: Anne Hoyle, State Coordinator, Easton Public Schools, Easton, MA 02375
Presenters: *Anne Hoyle*, State Coordinator, Mass. Future Problem Solving Program
Joan Duff, Manager, Community Relations, Honeywell, Inc.
Program Focus: To train students in grades 4 through 12 to solve creatively problems of the future.

Participants: Students, grades 4 - 12
Honeywell employees
Teachers, graduate students
Structure, Management and Coordination: The Massachusetts program is part of the National Future Problem-Solving Bowl and is sponsored by the Massachusetts Association of Individual Potential, Inc. (MA/AIP), the Mass. Department of Education, Office of Gifted and Talented, and Honeywell, Inc. The program is managed by an all volunteer staff consisting of the State Coordinator and three coordinators for the three segments of the program. The State Coordinator, who is the primary contact person for the program in each school and for the other coordinators, is responsible for directing the program under the guidelines established by the national organization. Volunteers, who include parents, teachers, Honeywell employees, and others, are called coaches and, after receiving training from the State Coordinator, work with student teams on problem solving approaches.

Successful teams enter the Massachusetts Problem-Solving Bowl and the winners of the State Bowl are eligible to compete in the National Bowl.
Funding: Honeywell, Inc. covers the expenses for the Program at this time. There is consideration of finding additional funding in order to pay the staff and to expand the Program into more schools in the Commonwealth.

Massachusetts Pre-Engineering Program for Minority Students (MASSPEP)
Address: c/o Wentworth Institute of Technology, 550 Huntington Ave., Boston, MA 02115
Presenters: *Richard Mullins*, Executive Director, MassPEP
Alan Davis, Director of Governmental Affairs, Boston Edison Company
Program Focus: To give minority students the math and science skills and background they will need to enter undergraduate programs in engineering, science, and technology.
Participants: Students in participating Boston High Schools
Selected institutions of higher education
Volunteers from engineering and high technology companies
Structure, Management and Coordination: MassPEP operates with a full time staff consisting of an Executive Director, who is responsible for program development and implementation, a Program Coordinator, who is responsible for managing the program at the school sites, and a secretary. A Board of Directors has the fiduciary and policy responsibilities for the Program and includes business executives, superintendents of the participating school systems, university presidents, and community agency representatives. Each school site maintains a team of four or five teachers and counselors who, with their school coordinator, work with the students and are paid an honorary stipend. The MassPEP staff meets monthly with the school coordinators and holds quarterly meetings with each school team.
Funding: MassPEP receives financial support from corporations and grants from several foundations.

Multi-Cultural Student Leadership Project
Address: 985 Dorchester Avenue, Dorchester, MA 02125
Presenter: *Susan Worgaftik*, Project Director, Panel of Agency Executives
Program Focus: To develop leadership skills in students through training and projects that will encourage racial-ethnic harmony and improve students' self-image.
Participants: Boston Public Schools
Teachers and students
Youth Workers
Structure, Management and Coordination: The Boston School Department identifies schools with which it would like the Project to work. The school principals identify one or two teachers who then select students for the Project. A Youth Worker for each school is provided by local human service agencies. The Project Director provides training for students, teachers, and Youth Workers, coordinates the program development for the year, and provides communication between the teachers, the school, and the District Office.
Funding: The Project has received Federal funding, foundation funding, and monies from the School Department and the Panel of Agency Executives.

Newburyport Partnership
Address: 70 Low Street, Newburyport, MA 01950
Presenters: *Francis Bresnahan*, Superintendent, Newburyport Public Schools
Emmett Goggin, Principal, Newburyport High School
Edward Molin, President, Berkshire Manufactured Products
Program Focus: To enhance the career development opportunities available to students through a cooperative effort between the Newburyport Chamber of Commerce and the public schools.
Participants: Newburyport Public Schools
Newburyport Chamber of Commerce
Area business people

Structure, Management and Coordination: The Industry/Education Committee of the Chamber of Commerce meets monthly to plan and implement programs for the high school. The school system has individuals in the Guidance Department as well as individual teachers who are responsible for coordinating activities with the Chamber. The Chamber has, for each grade in the high school, different programs, which include guest speakers, tours, and job readiness activities, and a work experience program which is generally for graduating seniors.
Funding: No cost is associated with the operation of the programs.

Regional Expanding Vocational Awareness Project (REVAP)
Address: 615 Concord Street, Framingham, MA 01701
Presenters: *Catherine Lamothe*, Director, REVAP
Mary Lou Cashman, Director of Guidance, Natick Public Schools
Program Focus: To infuse career awareness into the K-12 curriculum, to provide training and professional development for teachers, and to provide technical assistance to school administrators.
Participants: Nine public school systems
Businesses from the nine area communities
South Middlesex Area Chamber of Commerce (SMACC)

Structure, Management and Coordination: Under the sponsorship of the South Middlesex Area Chamber of Commerce, the Industry-Education Advisory Council, which is composed of the 9 area Superintendents of School and 9 Executive Officers of area companies, meets bi-monthly and makes major decisions about the direction of the Project. REVAP is housed at the Chamber offices and is staffed by a full-time Project Director and three and one-half career specialists who work with the participating schools. The paid staff does much of the Project planning and implementation, while the Director keeps the staff informed of decisions made by the Industry-Education Advisory Council and takes staff ideas back to the Council.
Funding: REVAP is supported by SMACC through its dues structure and special solicitations and by corporate, foundation, and public sector funding.

Springfield School Volunteers/Corporate Action Program
Address: 195 State Street, Springfield, MA 01103
Presenters: *Carol Kinsley*, Supervisor, Springfield School Volunteers
Richard Garvey, Editor, Springfield Daily News
Program Focus: To develop a partnership between the business community and the Springfield Public Schools.
Participants: Springfield Public Schools
Businesses in the Springfield area

Structure, Management and Coordination: A non-profit Board of Directors, Springfield School Volunteers, Inc., composed of parents, business people, community leaders and school personnel, is responsible for fund raising and program planning for all of the SSV programs. The SSV Advisory Board, composed of 22 parents, senior citizens, and representatives from community agencies, helps develop the organization's calendar of commitments and carries out parent outreach programs. It also oversees the volunteer training program and works to promote the program in the schools. The Corporate Action Program, one of several programs within the SSV, is coordinated through the Supervisor of the SSV, who is employed by the Springfield Public Schools. Businesses that are willing to share their resources and to participate in the development of programs and services for the staff and students of the Springfield Public Schools are recruited for pairing with schools. Partnership programs vary from on-going projects to special time-limited programs. Each school and business defines its own partnership.
Funding: Springfield School Volunteers, Inc. receives contributions from area businesses to support the program.

Springfield School Volunteers/Mentor Program
Address: 195 State Street, Springfield, MA 01103
Presenters: *Helene Sweet*, Coordinator, Mentor Program
Manuel S. Drumm, Technology Manager, Monsanto Company
Program Focus: To provide community experiences for gifted and talented students in the Springfield Public Schools.
Participants: Springfield Public Schools
Springfield area business people, parents
Citizens, college personnel
Structure, Management and Coordination: This program, as a component of the Springfield School Volunteers (SSV) program (see Springfield School Volunteers description above), is overseen by the SSV Board. It is directed by staff of the SSV and is housed in the Springfield Public Schools. Gifted students whose individual interests cannot be accommodated within the regular school program are identified and matched with community volunteers, from business, civic, and cultural organizations, who work with the students on specific projects. School personnel help with the identification of appropriate students and the program Coordinator recruits mentors from the community.
Funding: Corporate donations are provided by Springfield area businesses.

Tri-Lateral Council for Quality Education
Address: 600 Atlantic Avenue, Boston, MA 02210
Presenter: *May Ling Tong*, Executive Director, Tri-Lateral Council
Program Focus: To facilitate and promote cooperation between the Boston School Department and Boston businesses to improve the career educational opportunities for Boston students.
Participants: Boston Public Schools
Greater Boston Chamber of Commerce
National Alliance of Business
Structure, Management and Coordination: The Council has two administrative bodies: the Board of Directors, which consists of 14 members who are appointed by the School Department and the business representatives, and the Advisory Committee, comprised of 23 CEO's of the business partners. Each participating business designates a coordinator who spends at least one day a week in the partnership school. Each school designates a coordinator who spends at least one day a week matching business resources to school needs. The Council has a paid staff which coordinates the partnership efforts.
Funding: Each business member of the Council contributes to the program through Council dues and services. Funding is also received from Chapter 636 State desegregation funds and from fund-raising activities.

Worcester Area School Business Partnership
Address: Worcester Area Chamber of Commerce, 350 Mechanics Tower, Worcester, MA 01608
Presenters: *John Collins*, Superintendent, Shrewsbury Public Schools
Randolph Swillo, Manager of Personnel Services, Morgan Construction Company
Program Focus: To provide world of work experience, information and materials for high school students and teachers through school/business pairings; to facilitate positive public relations for the schools and business/education talent sharing on administrative/managerial/leadership affairs.
Participants: Superintendents from 17 area school systems
Representatives from at least 30 area businesses, institutions of higher education, and hospitals
Structure, Management and Coordination: Policy guidance and support comes from the School/Business Partnership Committee, which has been established by the Worcester Area Chamber of Commerce Community Development Department and which is composed of area business and education leaders. Chamber of Commerce staff provide

support to the Partnership and facilitate communication, publications, meetings, and fund raising for the Partnership.
Funding: Public and private sector grants are sought by the Chamber staff to support Partnership activities.

Worcester Public Schools School-Business Project
Address: Anne Quinn, Coordinator of Occupational Education, Worcester Public Schools, 20 Irving Street, Worcester, MA 01606
Presenters: *Anne Quinn*, Coordinator, Worcester Public Schools
Randolph Sicillo, Manager of Personnel Services, Morgan Construction Company
Program Focus: To provide a systematic and comprehensive career awareness and exploration program for students in the Worcester Public Schools, grades 8 - 12.
Participants: Worcester Public Schools
Worcester area businesses
Structure, Management and Coordination: Each grade level, from grades 8 - 12, has a distinct career awareness program and one company that oversees that program. In addition, each high school has a host company that works with the school to implement the programs at the school. The Director of Occupational Guidance and the Director of Guidance are the two primary coordinators for the school system. Business representatives provide the overall coordination on the business side.
Funding: Any costs incurred by the companies, such as employee time, are absorbed by the companies. Similarly, the schools bear any costs that they incur.

Afternoon Workshops
Critical Issues in
Industry-Education Partnerships

A. Major Themes from the Workshops
B. Strategies that Emerged from the Workshops

Conference participants were asked to select one of four workshops to attend in the afternoon session. These sessions paralleled the critical issues that partnership developers, in previous research, had identified as those which they hoped partnership efforts would address, and were as follows:

Educational Standards/Student Competence
Career Awareness/Work Preparation
Strengthening the Image of Education
Community Involvement

The recorders' notes on these sessions indicated that the workshop discussions yielded some common themes as well as specific strategies for addressing the issues. This section presents first the themes that ran through all of the workshops and then the strategies that participants in each of the four workshops recommended.

A. Major Themes from the Workshops

Commitment

1. It is essential to have commitment from the top administrative levels in both schools and businesses for school-business partnerships to be successful. In addition, schools and businesses need to:
   - identify liaison people whose responsibility it is to implement the partnership at their institution.
   - identify the giving and receiving expectations of the partnership and have these expectations clearly subscribed to and understood by top management.

2. **Corporations** should be willing to make the following specific commitments:
   - provide release time for executives.
   - indicate that they value the time that employees spend in partnership activities.
   - provide student and teacher training opportunities.
   - support schools through public recognition, legislative lobbying, and rallying financial resources.

3. **Schools** should be willing to make the following specific commitments:
   - assign high level administrators to oversee and coordinate partnership activities.
   - demonstrate an openness to business by meeting and working with business leaders and by sharing problems, needs, and goals.
   - make effective use of Advisory Councils.
   - become involved in the community and with civic organizations.

Communications and Public Relations

1. It is vital that good communication is established between schools, businesses and the community. Good communication can accomplish the following:
   - clarify the images and perceptions of all of the parties involved.
   - develop trust, openness, and receptivity to working together.
   - define standards, competencies, and expectations.
   - identify needs, resources (human and material), and problems.
   - inform others about the achievements of the schools.
   - provide political support for the schools.

2. Schools need to be better public relations agents for themselves, and can work with the expertise in business to tell their story to their communities.

Standards and Competencies

1. Schools and businesses need to work with each other to establish the specific standards and competencies that are expected from students and employees. These standards and competencies should meet the following criteria:
   - relevant and clear to employers and educators.
   - grounded in "real world," basic and world-of-work skills.

2. School-business programs should address the following concerns:
   - partnerships should take advantage of their potential for drop-out prevention.
   - career awareness programs should be planned for students throughout the school system, i.e., for K-12 and college and non-college bound students.
   - career awareness programs should be infused into the regular school curriculum.
   - career awareness and training programs should be made available to special needs and handicapped students.

Teacher Development and Recognition

1. Schools and businesses should take responsibility for the on-going development of teachers. Working together schools and businesses can:
   - update, renew, and expand teachers' knowledge and skills.
   - provide "world-of-work" experiences.
   - provide in-school and community recognition for excellence in teaching, such as:
     - mini-grants
     - scholarships
     - internships
     - summer training opportunities
     - sabbaticals
     - industry exchange programs

2. Schools should take steps to improve the morale of teachers, such as:
   - involving them in the decision making process in schools.
   - working to develop collegial environments in schools.
   - providing recognition for outstanding performance.

B. Strategies that Emerged from the Workshops
Educational Standards

What Schools Can Do

Review and Upgrade Standards

- Identify and publicize the skills and competencies that are required for graduation.
- Infuse the curriculum with "real world" information and experiences.
- Provide teachers with resource banks and speakers' bureaus from which they can access outside resources to enrich their curricula.
- Develop internship and other work-site opportunities for students and teachers.
- Review testing procedures, processes and rationale.
- Review the relevance of testing for all students.
- Provide a strong curriculum for all students in the school system, whether college or non-college bound.

Communicate With Business

- Develop relationships with the local business community.
- Invite business people to come into the school to discuss the academic curriculum that relates to their business and to meet the faculty teaching that curriculum.
- Make meaningful use of business people on Advisory Committees.
- Develop competency-based curricula in consultation with business leaders.

Use Public Relations Techniques to Promote the Schools

- Use newsletters, newspapers, cable television, etc., in a public relations program which informs the community of the accomplishments and activities of the schools.
- Invite the community into the schools for community nights, wine and cheese, and coffees to learn about what is being taught in the schools.
- Use every opportunity at which the community is in the schools (voting, town meetings, school productions) to provide information on the schools.

What Businesses Can Do

Indicate Their Commitment to the Schools

- Secure the support and commitment of CEO's for involvement with the schools.
- Encourage employees to act as guest speakers, mentors, and tutors.
- Build school involvement into the evaluation criteria of employees.
- Provide lobbying support for legislative initiatives regarding the schools and encourage others to do the same.

Participate in the Review and Upgrading of School Standards

- Identify the competencies necessary for entry-level positions and communicate these to the schools.
- Identify the problems of the workplace that can be addressed through world-of-work curricula in the schools.
- Serve on committees that discuss academic programs and that develop curricula to address job-related competencies.
- Support the attendance and academic policies of the schools through student work policies at the company.

Use Their Public Relations Expertise in Support of the Schools

- Work with the schools to help them plan and execute a public relations program.
- Communicate support of and participation with the schools through the company's public relations vehicles.

What Schools and Businesses Can Do Together

- Establish school-business committees that maintain on-going communication about educational standards, school decision making, and business requirements.
- Coordinate a mutual exchange of staff to provide for curriculum development and staff training.
- Develop programs that allow teachers to renew and upgrade their skills, especially in math and science.
- Plan and implement public relations campaigns that inform the community about school standards, programs, achievements, expectations, and goals.

Career Awareness

What Schools Can Do

Develop Career Awareness Curricula

- Provide students with career awareness curricula starting in elementary school.
- Develop programs which give students relevant world-of-work experiences, including guest speakers, tours, job-shadowing experiences, internships, etc.
- Use varied approaches in career exploration curricula, including role-playing, mock interviews, video-taping, and other experiential techniques.
- Provide students with the job seeking and job holding skills they will need.
- Infuse career curricula with information on the free enterprise system and on the expectations and work ethic of business.
- Enlist corporate consultants to advise teachers and career guidance counselors regarding business expectations and career trends.

Insure Staff Preparation

- Provide an adequate number of career and guidance counselors in the schools.
- Provide in-service and other training for career and guidance counselors on new technologies and career areas, business requirements, corporate culture, and other job-related information.
- Require that all teachers assume some guidance responsibilities so that they are aware of the relevance of their curriculum to students as they prepare for the "real world."
- Require teachers to infuse career awareness into academic areas.

Maximize Community Involvement

- Develop career resource files for teacher and student use.
- Use the Chamber of Commerce and other civic organizations to communicate to the business community the importance of business and community internships and work-study placements for students.
- Develop and implement public relations programs through the newspaper, school newsletters, and local television.
- Encourage business in-house communications vehicles to publicize the career awareness programs underway in the schools.
- Provide recognition and gestures of appreciation for all community and business resources utilized by the schools.
- Involve parents in career awareness programs to maintain their support and update their information on the careers and the economic and employment trends of the future.

What Businesses Can Do

Demonstrate Their Commitment

- Secure the commitment of CEO's for career awareness programs in schools and communicate to employees the companies' support of these partnership programs.
- Make career programs with schools a priority for one or more employees and emphasize the importance of their being accessible and responsive to the schools.
- Participate on Advisory Councils established by schools for developing career awareness programs and for infusing career awareness issues into the curriculum.
- Support the career awareness programs of the Chamber of Commerce and other civic organizations.
- Encourage business leaders to become a voice for career awareness in the schools through serving on School Boards and other school committees.
- Publicize the company's involvement in career awareness programs in the schools and encourage other businesses to become similarly involved.
- Encourage and facilitate employees' participation in career awareness programs in their children's or neighborhood schools.
- Support legislation and funding measures that provide for career awareness programs in schools.

Assist With the Development of Career Awareness Programs

- Provide opportunities for student and teacher internships, work-study programs, and summer programs.
- Provide continual opportunities for students and teachers to spend time on company sites and to become familiar with and comfortable in the business environment.
- Help schools develop their career resources by serving as linkers with other businesses and with community agencies.
- Assist schools in providing non-traditional role models for school career programs (such as women in engineering and men in nursing) and in locating small business owners, entrepreneurs, professionals and others who frequently are not included in career awareness programs.
- Work with schools to develop and implement career days and job fairs.

What Schools and Businesses Can Do Together

Communicate and Share Resources

- Coordinate the efforts involved in preparing the school, the workplace, and the participants for career awareness programs so as to harmonize expectations and goals.
- Recognize and reward school and business staff involvement in career awareness programs.
- Develop agendae for Business Advisory Councils that address the needs of both schools and businesses.
- Develop a clearinghouse of career and educational resources available within the schools and companies that can be used by both.
- Work together to develop competencies and skills required for specific entry-level jobs.
- Informally share information on prospective job candidates and on the outcomes of recent hires in order to assess the validity of school preparation.
- Develop career awareness programs and internship experiences that address special populations, such as potential drop-outs, unmotivated students, handicapped students, and special needs individuals.

Exemplify Successful Programs

- Serve as role models for other schools and businesses in the area of developing career awareness programs, and take advantage of opportunities to give information and assistance to others seeking to replicate existing programs.
- Encourage the development of a professional association of school and business leaders, such as could be sponsored by the Chamber of Commerce, to address the local community's career awareness needs.

Strengthening the Image of Education

What Schools Can Do

Increase Their Public Relations

- Develop a public relations strategy that will educate the public about the goals and accomplishments of the schools.
- Provide information to the public about the schools, students, teachers, and administrators on an ongoing basis through vehicles such as school meetings, coffees in homes, and formal and informal gatherings with school personnel.
- Invite businesspeople into the schools to career days, to meet with department heads and teachers in areas related to their business concerns, and to use the school facilities for business meetings and activities (recreation, seminars, workshops).
- Develop opportunities for school personnel to become involved in community activities (United Way, community celebrations, scholarship committees) in order to increase citizens' awareness of the excellence on the staff.
- Develop programs to make new friends for the schools, including alumni, senior citizens, parents and others with no children in the schools, and parents of pre-school children.

Encourage the Professional Development of Teachers

- Strengthen teacher morale by providing a collegial atmosphere, giving teachers more voice in decision making, providing an incentive system that rewards excellence, and providing appropriate and competitive compensation for teachers.
- Set higher standards for teachers and support staff and remove incompetent staff.
- Provide opportunities for teachers to take sabbaticals, internships, and to attend development workshops and conferences in order to renew and enhance their skills.
- Allow teachers to take advantage of world-of-work opportunities in non-school settings to give them information with which to communicate to students the skills needed and the environment found in the business world.
- Encourage in-house communication between teachers in different disciplines and between teachers and career guidance counselors.
- Provide community resource files for teachers and encourage them to use them to supplement their classroom teaching.

Instill Modern Management Techniques In Schools

- Centralize and computerize school information systems for effectiveness and efficiency.
- Request and take advantage of the expertise available among business friends in the community.

What Businesses Can Do

Develop Communication With the Schools

- Meet with teachers and administrators to get to know them and to work on issues of mutual concern.
- Provide training presentations to school staff at in-service sessions.
- Invite school personnel to make presentations at business meetings.

Assist the Schools With Their Public Relations Campaigns

- Provide assistance to schools as they plan and execute their public relations programs.
- Help schools with their networking efforts by opening doors that school personnel have difficulty opening on their own, including to other businesspeople, professional and trade associations, and community organizations.
- Express support of the schools by publicizing their accomplishments and programs to the public, the media, and to legislators.
- Encourage employees to get involved with the schools and to get to know teachers through participating in career awareness programs in local communities.
- Provide programs and competitions that reward excellence and achievement by students and teachers in the schools.
- Take a leadership role in community programs that support the schools.

Encourage the Professional Development of Teachers

- Provide professional development opportunities for teachers through summer internships, staff exchange programs, and research grants.
- Invite school administrators to participate in and take advantage of business training sessions, especially in the areas of management, finance and marketing.
- Invite teachers to particpate in business training sessions in their teaching area, such as

What Businesses Can Do (Continued)

computers, math, science, business education, etc.

- Help teachers with the research for and development of new curricula and specific classroom units.

What Schools and Businesses Can Do Together

Communicate and Develop Mutual Respect

- Meet together regularly to discuss common issues and problems and to define mutual expectations and goals for the partnership.
- Develop trust, openness, confidence and mutual respect through ongoing interaction over time.
- Work together to develop vehicles for respective staff to develop understandings of and appreciation for each other's goals, expectations, constraints, and issues.

Develop Public Relations Programs

- Work together to develop and implement public relations campaigns for the schools.
- Develop ways to maintain the public's awareness of the standards and goals of the schools.

Work for the Professionalization of the Teaching Profession

- Work through the political process to obtain increased salaries for teachers, compensation for extra-curricula tasks, and defined qualifications for promotions and raises.
- Develop on-going programs for teachers' professional development.

Community Involvement

What Schools Can Do

Open the Schools to the Community

- Make school facilities open to the entire community throughout the year, including evenings, Saturdays, holidays, and summers.
- Work with community organizations to develop programs that make the schools the site of activities for people who do not have children in the schools, such as the elderly, single adults, and parents of pre-school or post-school children.
- Welcome volunteers in the schools and provide meaningful and rewarding experiences for these volunteers.
- Take advantage of any opportunity that brings citizens into the schools, such as school performances, voting day, town meeting, etc., to provide information and displays on the schools and their activities.
- Offer the schools as meeting locations for business groups, community groups, and citizens.
- Develop procedures to make the recreational and educational facilities of the schools available in non-school hours, including such areas as gymnasiums, computer rooms, and language laboratories.

Become Involved in the Community

- Enroll the school system in organizations, such as the Chamber of Commerce, which are concerned with the business and educational life of the community.
- Take the opportunities that community organizations offer to interact with business and community leaders.
- Encourage students to participate in community sponsored events, such as science fairs, road races, art competitions, etc.
- Designate a community liaison person in the schools so that business and community people will know who to contact when they want to propose ideas to the schools.
- Take advantage of the resources in the community, such as the guest speakers, tutors, and mentors available through churches, civic organizations, and cultural organizations.
- Be prepared to call on individuals in business with specific and action-oriented proposals when needs or problems arise.
- Provide teachers and students with opportunities to interact with community groups to increase each group's awareness and respect.

Make Effective Use of Citizen Participation

- Use Business Advisory Councils productively and efficiently and prepare carefully and thoroughly for these meetings.
- Identify individuals who are key business people and who also have children in the schools. Encourage these individuals to use their areas of expertise for the schools and to serve on School Boards and committees.
- Make effective use of Parent-Teacher Organizations and other parent groups, and give them a legitimate role to play in the school.

What Businesses Can Do

Indicate Commitment to Partnerships

- Provide top corporate leadership for partnership activities.
- Designate a partnership coordinator in the company.
- Invite school personnel to participate in discussions about the mutual needs and concerns of the schools and business.
- Identify resources that can be shared with the schools.
- Share partnership techniques, experiences, and successes with other businesses and encourage them to get involved with the schools.
- Encourage legislative action that supports partnerships.
- Provide recognition for partnership programs in the community.
- Provide leadership in indicating to the business community the benefits of having a strong local school system.
- Encourage business people to serve on School Boards and committees.
- Share management techniques and expertise with the schools.
- Make appropriate components of the company's facilities available to the community, such as recreational areas, computer or science laboratories, and libraries.
- Be proactive in bringing educational and training issues to schools.

What Businesses Can Do (Continued)

Actively Participate in Career Awareness Programs

- Provide employees with release time to volunteer in the schools.
- Develop slide presentations of the variety of skills and career opportunities available in the company.
- Ask for volunteers in the company to whom students or teachers can be referred for specific information or projects.

What Schools and Businesses Can Do Together

Upgrade the Public Relations of the Schools

- Develop and implement public relations campaigns for the schools.
- Work with the local media (newspaper, radio, television) to promote the schools and partnership activities.

Encourage Community Involvement in the Schools

- Encourage civic, business, and professional organizations to become involved with the schools.
- Work with the Parent-Teacher Organization to involve the business community in the schools.
- Develop child care programs for parents involved in volunteer programs in the schools.
- Request PTO parents' employers to grant release time for PTO planning meetings.
- Establish community-wide committees to work on special school projects such as career fairs, parades, celebrations, etc.
- Work together to address major issues that affect the schools, such as drug abuse, vandalism, etc.
- Use joint resources to raise parents' consciousness about the schools, partnership programs, and career awareness activities.
- Work together to develop the cultural resources of the community through providing public relations, personnel, and facilities.
- Develop an Educational Foundation for the schools.

Summaries and Next Steps

Katherine Best
Director
Northeast Regional
Education Center

Each conference was concluded by the Director or the Assistant Director of the Regional Education Center for the region of the state in which the conference was held. These comments brought together the discussions that had been held in the workshops and looked to the future kinds of cooperation and support that the Directors were willing to provide to school systems and businesses in their local areas.

The Directors reviewed their offices' capability for working with community businesses and organizations and emphasized the excellent results they had seen in their regions from the existing school-business partnerships. In addition, some Directors pointed out specific other resources in their region, of which businesses and schools could take advantage, and encouraged conference participants to contact these organizations for information on partnerships, for referral to specific models, and for help in finding other institutions whose interests and needs paralleled theirs.

Marlene Godfrey
Director
Greater Boston Regional
Education Center

Two of these resource people made presentations at this session. Donald Pierson, Director of the Lowell Model for Educational Excellence, spoke about the goals of the Lowell Model and invited conference participants to "embark upon partnership programs in research and development." John McDermott, Area Coordinator for Career and Occupational Education at Shawsheen Valley Vocational Technical School, shared techniques for working with businesses and emphasized the importance of educators looking to businesses for assistance because "education cannot be everything to everyone."

As the conference participants then adjourned the formal session for a social hour, there was a feeling that the potential for industry-education partnerships in Massachusetts was unbounded, and that the tools for success were at hand. It is our hope that some of that spirit has been transmitted to you through this booklet, and that you have found some useful and practical solutions that will be of assistance to you in your collaborative efforts. The Community Education Project of the Massachusetts Department of Education wishes you great success!

Curt Hall
Director
Southeast Regional
Education Center

Joan Schuman
Director
Central Mass. Regional
Education Center

Delois Swan
Assistant Director
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Shrewsbury Public Schools

Timothy Kilduff
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Walter Muther
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